

ER1000~ER1006

SUPERFAST RECOVERY RECTIFIERS

VOLTAGE 50 to 600 Volts **CURRENT** 10 Amperes

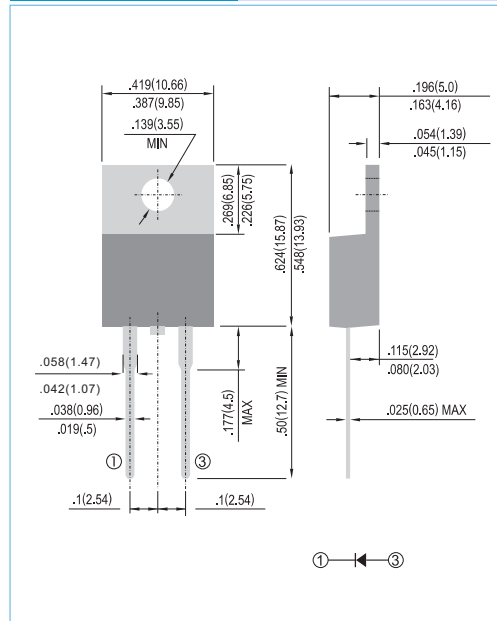
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- Super fast recovery times, high voltage.
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: TO-220AC Molded plastic
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.0655 ounces, 1.859 grams.

TO-220AC Unit: inch (mm)



MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

PARAMETER	SYMBOL	ER1000	ER1001	ER1001A	ER1002	ER1003	ER1004	ER1006	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Current at Tc =100°C	I _{F(AV)}	10.0							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I _{FSM}	150							A
Maximum Forward Voltage at 10A, per element	V _F	0.95				1.30		1.7	V
Maximum DC Reverse Current at T _j =25°C Rated DC Blocking VoltageT _j =100°C	I _R	1.0 500							μA
Maximum Reverse Recovery Time (Note 2)	t _{rr}	35				50			ns
Typical Junction capacitance (Note 1)	C _J	62							pF
Typical Thermal Resistance	R _{θJC}	3.0							°C / W
Operating Junction and Storage Temperature Range	T _J ,T _{STG}	-55 to +150							°C

NOTES:

- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- Reverse Recovery Test Conditions: $I_F = .5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = .25\text{A}$.
- Both Bonding and Chip structure are available.

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RATING AND CHARACTERISTIC CURVES

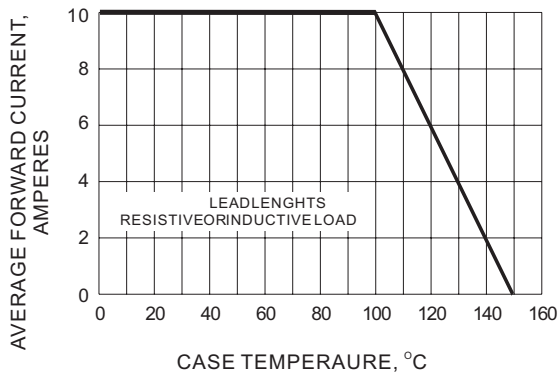


Fig.1- FORWARD CURRENT DERATING CURVE

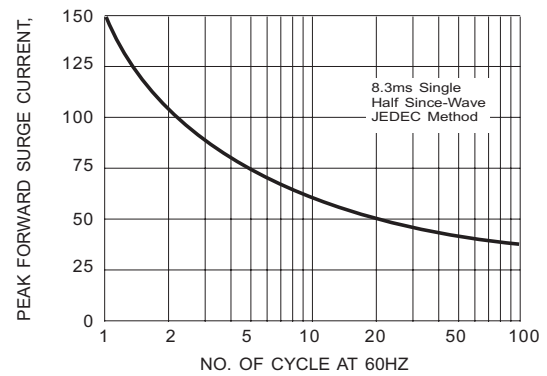


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

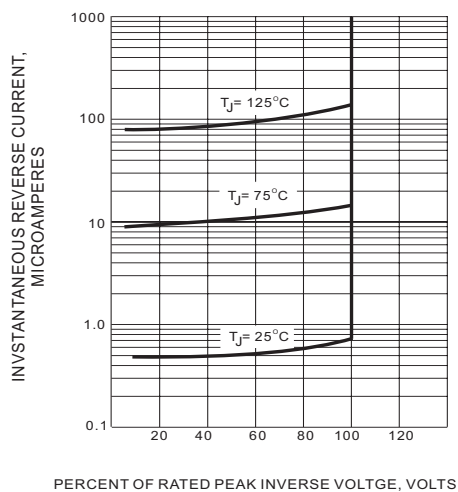


Fig.3- TYPICAL REVERSE CHARACTERISTIC

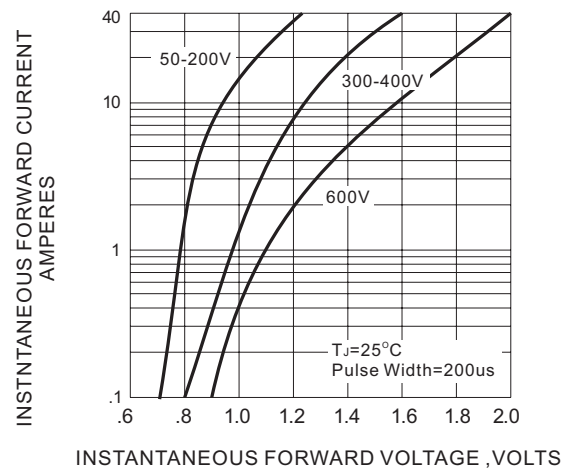


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC